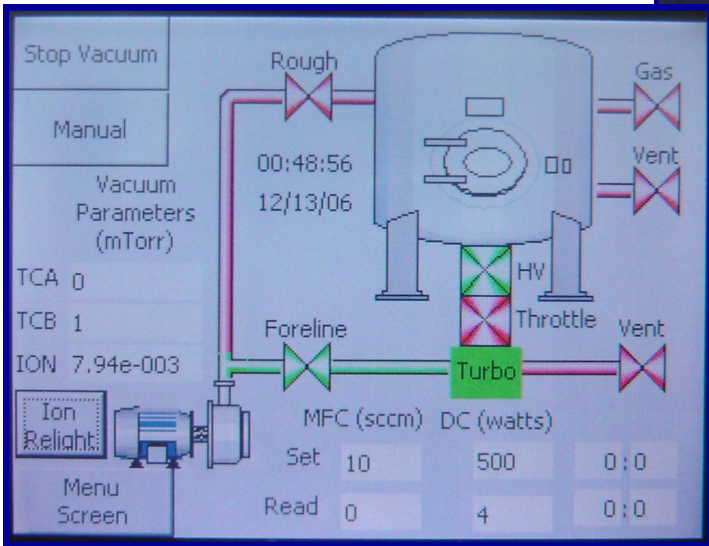


## HUMMER® 8 SPUTTERING SYSTEMS

See Page 2 for optional  
Horizontal Mounted Chamber

**HUMMER 8.3**  
Shown in photo



Siemens S7-200 "Touch-Panel" Control Package

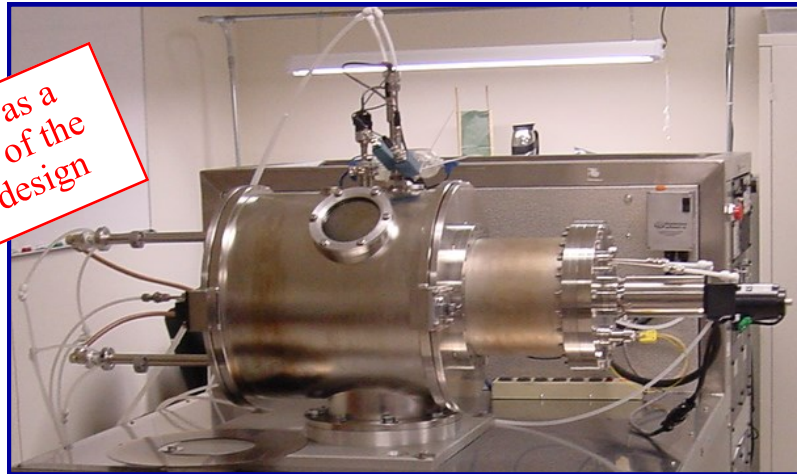
**Hummer® Series  
Deposition Systems  
HUMMER 8.1, 8.2, 8.3 SERIES**

**QUARTZING  
CV DOT MATRIX  
FAILURE ANALYSIS  
MATERIALS RESEARCH  
SUPERCONDUCTOR RESEARCH  
MICROELECTRONICS RESEARCH**



# Anatech USA Hummer® 8 Series Sputter Deposition Systems

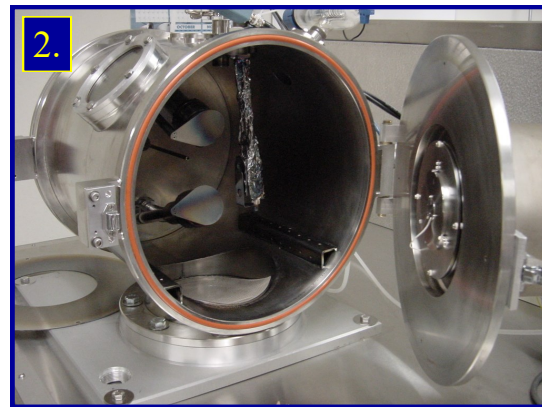
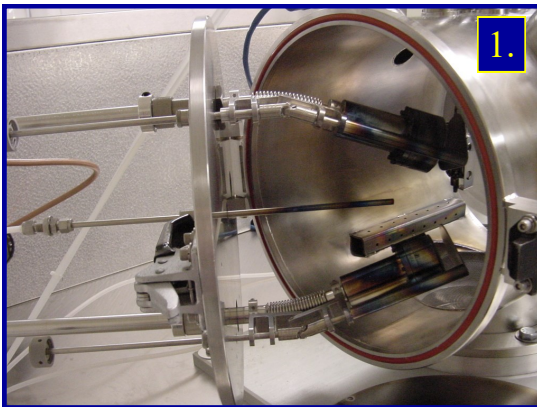
**Note:** Photo is shown as a representative sample of the horizontal chamber design



## **OPTIONAL:** Horizontal Mounted Chamber “Sputter-Side” Deposition

The chamber shown represents a “side-sputter” configuration. This chamber design can be used on the 8.1, 8.2, 8.3 series systems when particulate avoidance is required. Sources and Substrate are mounted 180° opposite from each other, preventing substrate contamination from particles.

Normal horizontal orientation on the Hummer 8 series equipment rack, places the fixed position view port outward toward the system operator. Chamber end doors open allowing access to the sample stage and sources.



### **Photo View:**

1. Chamber source door - open
2. Chamber sample stage door - open
3. Chamber interior view - pumping port located in the bottom of the chamber.



# Anatech USA Hummer 8

Performs sputter coating, a cold process in which ions impacting a metal source dislodge metal atoms. The atoms disperse throughout the process chamber to uniformly coat irregularly shaped specimens without thermal damage. Sputter coating produces high quality coatings whose thickness is repeatable and easily controlled. Cold, fast sputter rates require less time, giving you more time for microscope examinations.

## STANDARD BENEFITS / FEATURES

High sputter rate of metals with DC power and/or sputter insulators with RF power supply.  
Operator safety assured with interlocks for vacuum and power  
Automatic slow venting at termination of process.  
Stainless steel chamber  
Siemens control package—"Touch-Panel" control  
Pass word protected control package  
Sample stage accommodates up to an 8-inch (200-mm) substrate or multiple smaller substrates.  
Stage rotates and adjusts 2" vertically.  
A two-stage direct drive rotary pump assures rapid pump-down.  
Easy access to pump oil fill and drain ports simplify maintenance.  
Turbo High Vacuum pump is internal to the cabinet

## OPTIONS

Wide selection of targets  
DC and RF power upgrades  
Water chillers  
Thickness monitors  
Pneumatic source shutters  
High vacuum 3-position throttle valve  
Oxygen service preparation  
Cryo pump

## PLATING WITH A HUMMER®

Depending on the metal source installed, Hummers can deposit thin films of gold, gold/palladium, silver, platinum and other metals or insulators. To use a different metal source, simply pull out one, and push in another. The HUMMER top plate lifts off for easy target change and maintenance.

The stage accepts many sizes of substrates up to 200 mm. The stage rotates under the sputter head(s) to achieve uniformity over a 200-mm diameter substrate. The cool, Omni directional shower of secondary ions and neutrals produces finer-grain deposits than thermal coating processes. When processing is finished, a solenoid controlled vent valve slowly brings the process chamber to atmospheric pressure, preventing turbulence. This also assures that oil cannot migrate from pump to process chamber, as can happen with manually vented systems.

## RUGGED, RELIABLE DESIGNS

Hummer® systems are built to deliver many years of faithful service. The first Hummer, made in 1970, is still in daily use. Since that first system, more than 5000 Hummers have been installed all over the world.

Vacuum connections are made and checked for leakage during manufacture, assuring vacuum integrity and allowing you to start working sooner because little assembly is required.

Safety interlocks protect both operator and equipment.

Anatech USA backs Hummer products with excellent customer service and support. A full line of spare parts is available for product maintenance.

## SPECIFICATIONS

Power requirements - 190-220 VAC, 50/60 Hz, 20-Amps  
Power output - 1500 watts DC power supply  
300 watt RF generator with auto-matching network  
Dimensions - 26" D x 21" W x 48" H (cabinet)

**CALL ANATECH USA TODAY TO DISCUSS YOUR APPLICATION**

**Anatech USA  
1395 Greg Street  
Suite 110  
Sparks, NV 89431  
775-657-8685**